**Tropism Investigation**

The class will be divided into 12 groups, there will be two groups for each seed type and tropism being studied. So the groups will be as follows:

* Pea seeds and phototropism
* Soya bean seeds and phototropism
* Maize seeds and phototropism
* Pea seeds and gravitropism
* Soya been seeds and gravitropism
* Maize seeds and gravitropism

**You will need the following materials:**

* Paper Towels
* Water
* Seeds
* Petri dishes
* Shoe box (for phototropism groups)

**Procedure:**

Gravitropism

1. Fold a piece of a piece of paper towel in half to get a crease down the middle of the towel.
2. Place the seeds down the middle of the towel, along the crease.
3. Fold the paper towel over and sit in a dish of water to keep the towel moist.
4. Put the paper towel in a Petri dish.
5. Place the dish as near to vertical as is possible.
6. Grow the seeds until the root is approximately 3cm long.
7. Use some roots as your control (that is roots which are handled in the same way but which have not had their root caps taken off)
8. Flick or cut off the very tip of 3 or 4 roots (if you have used maize seeds the root cap is the pinkish region at the very tip of the root)
9. Turn the roots horizontally and leave for one day.

Phototropism

1. Fold a piece of a piece of paper towel in half to get a crease down the middle of the towel.
2. Place the seeds down the middle of the towel, along the crease.
3. Fold the paper towel over and sit in a dish of water to keep the towel moist.
4. Put the paper towel in a Petri dish.
5. Place one dish near a window and the other in a closed box.
6. Grow the seeds until the root is approximately 3cm long of the seeds growing in light.

There will be no write-up submission for this lab, results will be discussed as a class. This will be used as a formative assessment.